

IN THE CLAIMS

1. (currently amended) An artificial intervertebral disc comprising:

a first baseplate and a second baseplate, each of said first and second baseplates having an outwardly-facing surface and an inwardly-facing surface, said first and second baseplates arranged such that said outwardly-facing surfaces of said first and second baseplates face away from each other, at least one of said outwardly-facing surfaces having a groove including a perimeter; and

a vertebral body contact element adapted to engage a vertebral endplate, said vertebral contact element having a central portion and a perimeter, said perimeter of said vertebral body contact element being disposed within said groove of said at least one outwardly-facing surface such that only said perimeter of said vertebral body contact element is secured to the perimeter of said groove~~said outwardly-facing surface~~, such that said central portion is remote from said groove of said outwardly-facing surface so as to form a gap therebetween when said vertebral body contact element is in a relaxed state.

2. (currently amended) The artificial intervertebral disc of claim 1, wherein the vertebral body contact element comprises a wire mesh having a resting shape of a dome convexly extending from the groove of the outwardly facing surface.

3. (original) The artificial intervertebral disc of claim 2, wherein the vertebral body contact element has a convexity depth approximating a concavity depth of the concave surface.

4. (original) The artificial intervertebral disc of claim 2, wherein the vertebral body contact element has a footprint approximating a footprint of the concave surface.

5. (currently amended) The artificial intervertebral disc of claim 2, wherein said vertebral body contact element is secured to the groove of the outwardly facing surface by a coating applied to the outwardly facing surface, wherein said coating is a plasma spray.

6. (previously presented) The artificial intervertebral disc of claim 5, further comprising an osteoconductive feature adjacent the wire mesh.

7. (original) The artificial intervertebral disc of claim 6, wherein the coating has the osteoconductive feature.

8. (currently amended) The artificial intervertebral disc of claim 1, wherein the vertebral body contact element has a resting shape of a dome convexly extending from the groove of the outwardly facing surface.

9. (original) The artificial intervertebral disc of claim 1, further comprising an osteoconductive feature adjacent the vertebral body contact element.

10. (cancelled).

11. (currently amended) An artificial intervertebral disc comprising:

first and second baseplates, each having an outwardly facing surface, the outwardly facing surfaces each having a groove including a perimeter,

said first and second baseplates being movable relative to one another and being disposed such that the outwardly facing surfaces face away from one another,

at least one of the grooves of the outwardly facing surfaces having ~~disposed thereon~~ a vertebral body contact element engaging only the perimeter of the groove, ~~for securably engaging an adjacent vertebral body endplate,~~

the vertebral body contact element having a central region and a perimeter, wherein said central region is

deformably reshapeable under anatomical loads such that the central region conformably deflects against ~~the~~ a vertebral body endplate to securably engage the vertebral body endplate,

a perimetrical region of the vertebral body contact element being buried in a coating disposed on the outwardly facing surface, wherein said central region is remote from said said groove of said outwardly-facing surface so as to form a gap therebetween when said vertebral body contact element is in a relaxed state.

12. (currently amended) The artificial intervertebral disc of claim 11, wherein the vertebral body contact element comprises a wire mesh having a resting shape of a dome convexly extending from the groove of said outwardly facing surface.

13. (original) The artificial intervertebral disc of claim 12, wherein the vertebral body contact element has a convexity depth approximating a concavity depth of the concave surface.

14. (original) The artificial intervertebral disc of claim 12, wherein the vertebral body contact element has a footprint approximating a footprint of the concave surface.

15. (original) The artificial intervertebral disc of claim 12, wherein the coating is a plasma spray.

16. (original) The artificial intervertebral disc of claim 12, further comprising an osteoconductive feature adjacent the wire mesh.

17. (original) The artificial intervertebral disc of claim 16, wherein the coating has the osteoconductive feature.

18. (currently amended) The artificial intervertebral disc of claim 11, wherein the vertebral body contact element has a resting shape of a dome convexly extending from the groove of said outwardly facing surface.

19. (original) The artificial intervertebral disc of claim 11, further comprising an osteoconductive feature adjacent the vertebral body contact element.

20. (original) The artificial intervertebral disc of claim 19, wherein the coating has the osteoconductive feature.

21. (currently amended) An artificial intervertebral disc comprising:

a first baseplate and a second baseplate, each of said first and second baseplates having an outwardly-facing surface and an inwardly-facing surface, said first and second baseplates arranged such that said outwardly-facing surface of said first and second baseplates face away from each other, at least one of said outwardly-facing surfaces having a groove including a perimeter;

a vertebral body contact element adapted to engage a vertebral endplate, said vertebral contact element having a central portion and a perimeter, said perimeter being the only portion of said vertebral body contact element disposed within said groove of said at least one of said outwardly-facing surfaces, said central portion being remote from said groove of said at least one outwardly-facing surfaces such that a gap is formed between said vertebral body contact element and said groove of said at least one outwardly-facing surfaces—~~and said vertebral body contact element~~; and

a coating disposed on said at least one outwardly-facing surface, wherein said perimeter of said vertebral body contact element is disposed in said coating such that said perimeter of said vertebral body contact element is secured to said perimeter of said groove of said at least one outwardly-facing surface.

22. (currently amended) The artificial intervertebral disc of claim 21, wherein the vertebral body contact element comprises a wire mesh having a resting shape of a dome convexly extending from the groove of said outwardly-facing surface.

23. (previously presented) The artificial intervertebral disc of claim 21, wherein said vertebral body contact element has a convexity depth approximating a concavity depth of the surface of the vertebral body.

24. (previously presented) The artificial intervertebral disc of claim 21, wherein the vertebral body contact element has a footprint approximating a footprint of the surface of the vertebral body.

25. (previously presented) The artificial intervertebral disc of claim 21, wherein said coating comprises a plasma spray.

26. (previously presented) The artificial intervertebral disc of claim 21, further comprising an osteoconductive feature adjacent the wire mesh.

27. (previously presented) The artificial intervertebral disc of claim 26, wherein said coating includes said osteoconductive feature.

28. (currently amended) The artificial intervertebral disc of claim 21, wherein said vertebral body contact element has a resting shape of a dome convexly extending from the groove of said outwardly-facing surface.

29. (previously presented) The artificial intervertebral disc of claim 21, further comprising an osteoconductive feature adjacent the vertebral body contact element.

30. (previously presented) The artificial intervertebral disc of claim 21, wherein said coating includes said osteoconductive feature.

31. (currently amended) An artificial intervertebral disc comprising:

first and second baseplates, each having an outwardly-facing surface, at least one of said outwardly-facing surfaces having a groove;

said first and second baseplates being movable relative to one another and being disposed such that the outwardly-facing surfaces face away from one another;

at least one of the outwardly-facing surfaces having disposed thereon a vertebral body contact element for securably engaging a concave surface of an adjacent vertebral body endplate, said vertebral body contact element having a perimeter being the only portion of said vertebral body contact element disposed within said groove of said at least one outwardly facing surfaces;

the vertebral body contact element being deformably reshapeable under anatomical loads such that the vertebral body contact element conformably deflects against the concave surface to securably engage the vertebral body endplate; and

the vertebral body contact element being secured to the groove of said outwardly-facing surface by being buried at its perimeter within a coating applied to the outwardly-facing surface, wherein a central region of said vertebral body contact element is remote from said groove of said outwardly facing surface when said vertebral body contact element is in a relaxed position.

32. (currently amended) The artificial intervertebral disc of claim 31, wherein the vertebral body contact element comprises a wire mesh having a resting shape of

a dome convexly extending from the groove of said outwardly-facing surface.

33. (previously presented) The artificial intervertebral disc of claim 31, wherein the vertebral body contact element has a convexity depth approximating a concavity depth of the surface of the vertebral body.

34. (previously presented) The artificial intervertebral disc of claim 31, wherein the vertebral body contact element has a footprint approximating a footprint of the surface of the vertebral body.

35. (previously presented) The artificial intervertebral disc of claim 31, wherein said coating is a plasma spray.

36. (previously presented) The artificial intervertebral disc of claim 31, further comprising an osteoconductive feature adjacent said wire mesh.

37. (previously presented) The artificial intervertebral disc of claim 36, wherein said coating includes said osteoconductive feature.

38. (currently amended) The artificial intervertebral disc of claim 31, wherein said vertebral body contact element has a resting shape of a dome convexly extending from said groove of said at least one outwardly-facing surface.

39. (previously presented) The artificial intervertebral disc of claim 31, further comprising an osteoconductive feature adjacent said vertebral body contact element.

40. (previously presented) The artificial intervertebral disc of claim 39, wherein said coating includes osteoconductive feature.

41. (previously presented) The artificial intervertebral disc of claim 31, wherein said vertebral body

contact element is disposed on both of said outwardly-facing surfaces.

42. (cancelled).

43. (cancelled).